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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/277,171	03/26/1999	CAMERON BOLITHO BROWNE	169.1167	3147
5514	7590	01/11/2006	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			AMINI, JAVID A	
			ART UNIT	PAPER NUMBER
			2672	
DATE MAILED: 01/11/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/277,171

Applicant(s)

BROWNE, CAMERON BOLITHO

Examiner

Javid A. Amini

Art Unit

2672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

Applicant's arguments filed 10/28/2005 have been fully considered but they are not persuasive.

Applicant on page 14 of remarks regarding the rejection of claim 21 under 35 U.S.C. 112, second paragraph argues that the claim 21 is dependent on claims 20 and 19. Applicant argues that how the cyclic change is randomly selected does not have to be set forth in this claim. However, Applicant does not respond to the Examiner's concern: What if there are two different elements, one is a simple and the other one is a complex elements? Examiner takes the statement in the specification on page 2, lines 9-13 discloses that the shape elements are regular geometric shapes, and are all of the same general shape. It is also preferred that the shape elements be of a similar size. In a particularly preferred embodiment, the shape elements are circles. Preferably, the shape elements are positioned at predetermined points within a closed curve, such as an outline of a font character. For the reasons above the rejection under 35 U.S.C. 112 second paragraph withdrawn.

Applicant on page 15 of the remarks argues the primary citation to Aono is directed to a geometric preprocessor for gouraud-shading.

Examiner's reply: According to the specification on page 5, lines 1-4 discloses that a linear interpolation is used in the preferred embodiments. The use of linear interpolation helps to ensure a relatively consistent opacity value across the final texture. However Applicant does not appear to specify the method that is used in the present invention, However, Aono is directed to Gouraud-shading, i.e. a method for linearly interpolating a colour or shade across a polygon, which is similar to the definition that

Art Unit: 2672

Applicant discloses in the specification on page 5. Also Aono is directed to a geometric meaning: using simple geometric forms such as circles and squares in design and decoration.

Applicant on the same page argues that the reference Aono does not teach that each shape element has an opacity, which varies over its surface.

Examiner's reply: Since Applicant argues that the reference Aono is using Gouraud-shading method and it's obvious the method is providing each of the shape elements with an opacity, which varies over its surface.

Applicant on the same page argues that the reference does not teach elements overlap to fill a predetermined region.

Examiner's reply: agrees with Applicant's argument that the reference does not teach, "shape element at each point overlap to fill the predetermined region". That is why the second reference Turk used to illustrate the claim invention as Turk discloses on page 291 under subject of "reaction-diffusion on a grid" creates spots of different sizes by changing the value of the constant s in the discrete form of equations. Turk in figs. 2-10 illustrates the concept of overlapping or to correspond in function of covering/lying over an area. The concept of Turk is shown in equations on page 291 at right column. That simulates each shape polygon using its four neighbors on the grid, and the primary reference Aono at col. 7 lines 28-30 teaches that his invention does not depend upon the element shape and the element size when meshing is performed, so users may specify the element shape and the element size. The other independent claims can also be responded at least the same reasons discussed above.

Examiner encourages Applicant to schedule an interview.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-37 rejected under 35 U.S.C. 103(a) as being unpatentable over Aono et al. (hereinafter refers as an Aono), and further in view of Greg Turk (hereinafter refers as a Turk) the title is Generating Textures on Arbitrary Surfaces Using Reaction-Diffusion, University of North Carolina at Chapel Hill, Computer Graphics, Volume 25, Number 4, July 1991.

1. Claims 1, 24, 29, 30, 32, 34, 36 and 38.

Claim 1, “a method of generating a colored or shaded texture for images to be displayed on a display device or printed, said method including the steps of: Aono in fig. 5 boxes 1, 11, 21 and 23 illustrates generating color and shading using radiosity processor and intensity-value filter. Also in box number 1 illustrates a geometry data i.e. the content of the geometry data includes the shape, position, and orientation of an object and attributes (such as color, gloss, reflectance and absorptivity, transparency, and use of a texture, see col. 8, lines 55-67. Aono illustrates the following step of “providing a plurality of shape elements, each shape element defining a surface; providing each of the shape elements with an opacity which varies over its surface” in fig. 19. Aono in fig. 19 illustrates triangles and squares as shape elements. Aono in fig. 19 illustrates equidistant points (e.g. vertices), “identifying a plurality of substantially equidistant points within

Art Unit: 2672

predetermined region of the images”. Aono in col. 6 line 3 teaches a gouraud shading (i.e. Gouraud shading is a method for linearly interpolating a colour or shade across a polygon. It was invented by Gouraud in 1971). Aono in col. 6, lines 41-45 teaches an intensity-value at each vertex of each element is calculated from the radiosity (i.e. Radiosity is a rendering algorithm used in 3D computer graphics) calculated for each element. Next, using the intensity-value at each vertex of each element performs Gouraud shading. A result of the Gouraud shading is displayed onto a display. Aono in col. 13, lines 17-18 teaches the step of “placing a shape element at each identified point, such that adjacent shape elements overlap to fill the predetermined region of the images such that the region when so filled has a substantially uniform opacity,” as the projected element overlaps with some pixels on the item buffer. The following step illustrated by Aono in fig. 5 step 23 “rendering the shade elements for output to a printer or display device, such that the overlapping opacities generate a colored or shaded texture”. Aono does not explicitly specify the claim language of “the shape element at each point overlapped”. However, Turk on page 291 under subject of “reaction-diffusion on a grid” creates spots of different sizes by changing the value of the constant s in the discrete form of equations. Turk in figs. 2-10 illustrates the concept of overlapping or to correspond in function of covering/lying over an area. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to substitute applicant’s described structure, by modifying Aonos’ fig. 5, between box 11 and box 25, incorporate Turk’s method of texture synthesis i.e. called reaction-diffusion and demonstrates how these textures can be generated in a manner that directly matches the geometry of a given

Art Unit: 2672

surface. This modification would have been beneficial to a user to compare results from different methods. Claims 24, 29, 30, 32, 36 and 38 are rejected similar to claim 1.

2. Claims 2-6 and 25-26,

See fig. 19 of Aono.

3. Claim 5-6,

Turk in figs. 2-3 illustrates the claim languages.

4. Claim 7-11 and 27-28,

Turk on page 295, under subject of "Mesh Cells from Voronoi Regions" teaches a finite-element mesh generation techniques, and see the calculation of the value $V'(p)$ on the same page under subject of "rendering". The steps of claims 8-10 is obvious because, it's disclosed in the concept of finite-element mesh generation techniques. For the step of claim 11, See fig. 19 of Aono.

5. Claim 12,

See fig. 17 of Aono and in col. 16, line 10.

6. Claims 13-15,

Turk in figs. 4-10 illustrates a color associated with the shape elements.

7. Claim 16,

Turk on page 291 left col. discloses two equations that the change of the concentration at a given time depends on the sum of a function.

8. Claims 17 and 20,

Turk on page 293 under subject of "Varying Parameters Across a Surface" teaches the claim language.

9. Claim 18,

Art Unit: 2672

The step is obvious because the more complex shape, the more time require to render the shape.

10. Claim 19,

The step of claim language is obvious, because by varying the opacity of a shape over time, the shape rendering changes over time.

11. Claim 21,

Applicant needs to verify the following statement: The claim claims that the period is selected at random for each element. Examiner's concern: What if there are two different elements, one is a simple and the other one is a complex element.

12. Claim 22,

The step is obvious see figs. 2-10 of Turk.

13. Claim 23,

See Turk in figs. 2-3 illustrates different type of patterns. But does not specify a font character outline.

14. Claims 31, 33, 35, and 37, the limitations of claims 31, 33, 35, and 37 are analyzed as discussed with respect to claims 1, 24, 29-30, 32, and 34-35 above.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

Art Unit: 2672

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Javid A. Amini whose telephone number is 571-272-7654. The examiner can normally be reached on 8-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on 571-272-7664. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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